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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/089,056

04/03/2002

Arno Lange

220950USOPCT

6861

22850 7590 02/07/2008
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

TOOMER, CEPHIA D

ART UNIT

PAPER NUMBER

1797

NOTIFICATION DATE

DELIVERY MODE

02/07/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/089,056	LANGE ET AL.	
	Examiner	Art Unit	
	Cephia D. Toomer	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 80,82,88 and 89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 80,82,88 and 89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the amendment filed October 31, 2007 in which claim 82 was amended.

The rejection of the claims under 35 U.S.C. 102(e) and 35 U.S.C. 103(a) is withdrawn in view of the amendment canceling the claims.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 82 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 82 is rejected because the adduct cannot include an n-butylamine unit when R⁴ and R⁵ are both alkyl. This only holds true for di-n-butylamine. Also, it is not clear how the adduct includes a 2-methylphenol unit when the phenol is disubstituted. Clarification and correction are required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 80, 82, 88 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plonsker (US 3,904,595) in view of Colucci (US 5,634,951).

5. Plonsker teaches a lubricating oil composition comprising a Mannich condensation product. The Mannich product is prepared by reacting a high molecular weight alkylphenol (MW 600-3000), an aliphatic amine (1-20 carbon atoms) and an aliphatic aldehyde (see abstract; col. 1, lines 42-53). The alkylphenols are made by alkylating phenol with a polyisobutene (see col. 1, line 61 through col. 2, lines 1-8). The aliphatic amine may be an n-butylamine (reads on di-n-butylamine) (see col. 2, lines 9-18). The aldehyde may be formaldehyde or a polymer thereof (see col. 2, lines 45-56). The Mannich condensation product is made by merely mixing the alkylphenol, aliphatic amine and aldehyde in the proper ratio and heating the mixture at a temperature from about 50 C (see col. 2, lines 63-67). The condensation reaction may be conducted in mineral oils (see col. 2, line 68 through col. 3, lines 1-5). Plonsker teaches the limitations of the claims other than the differences that are discussed below.

Plonsker is silent with respect to the polydispersity of the polyisobutene and to the phenol being 2-methyl phenol (cresol). However, Colucci teaches these differences.

Colucci teaches a fuel additive comprising a Mannich condensation product (see abstract). Colucci teaches that the polybutylene substituent has a polydispersity in the range of about 1 to about 4 and is highly reactive (see col. 2, lines 8-14, 64 through col. 3, lines 1-10). Colucci also teaches that the Mannich product may be made from high

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molecular weight alkyl-substituted derivatives of cresol (2-methyl phenol) (col. 3, lines 21-28).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a highly reactive polybutene having a polydispersity of less than 3 because Colucci teaches that these are conventional reactants used to prepare Mannich condensation products. It should be noted that the Mannich condensation product of Colucci is used in combination with a liquid carrier, such as the mineral oils disclosed in Plonsker (see col. 5, lines 18-30).

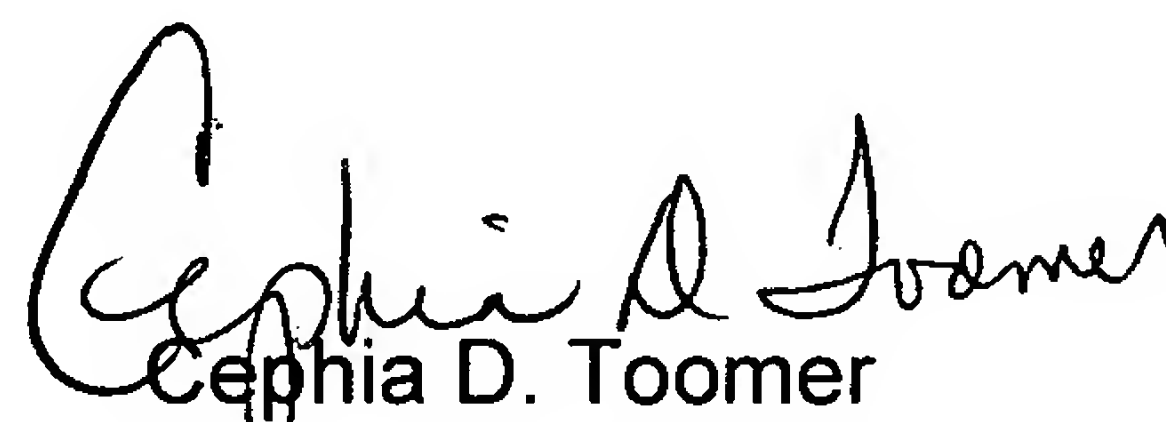
With respect to claim 82, Plonsker and Colucci do not specifically set forth the claimed adducts; however, it would be reasonable to expect that the claimed adducts would form, especially in view of Plonsker and Colucci teaching preparing a Mannich condensation product using similar reactants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Cephia D. Toomer
Primary Examiner
Art Unit 1797

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